

Fig. 2

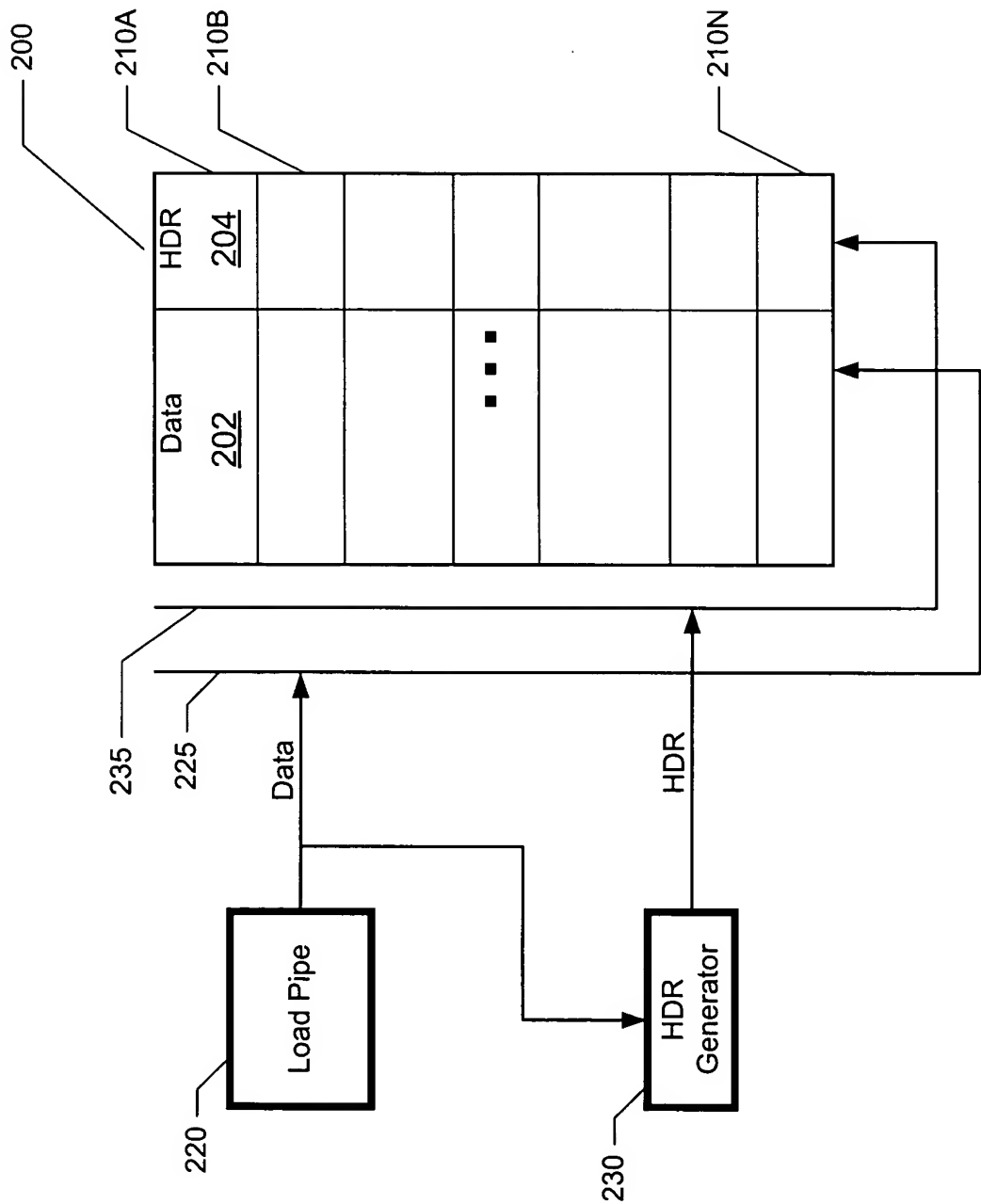


Fig. 3

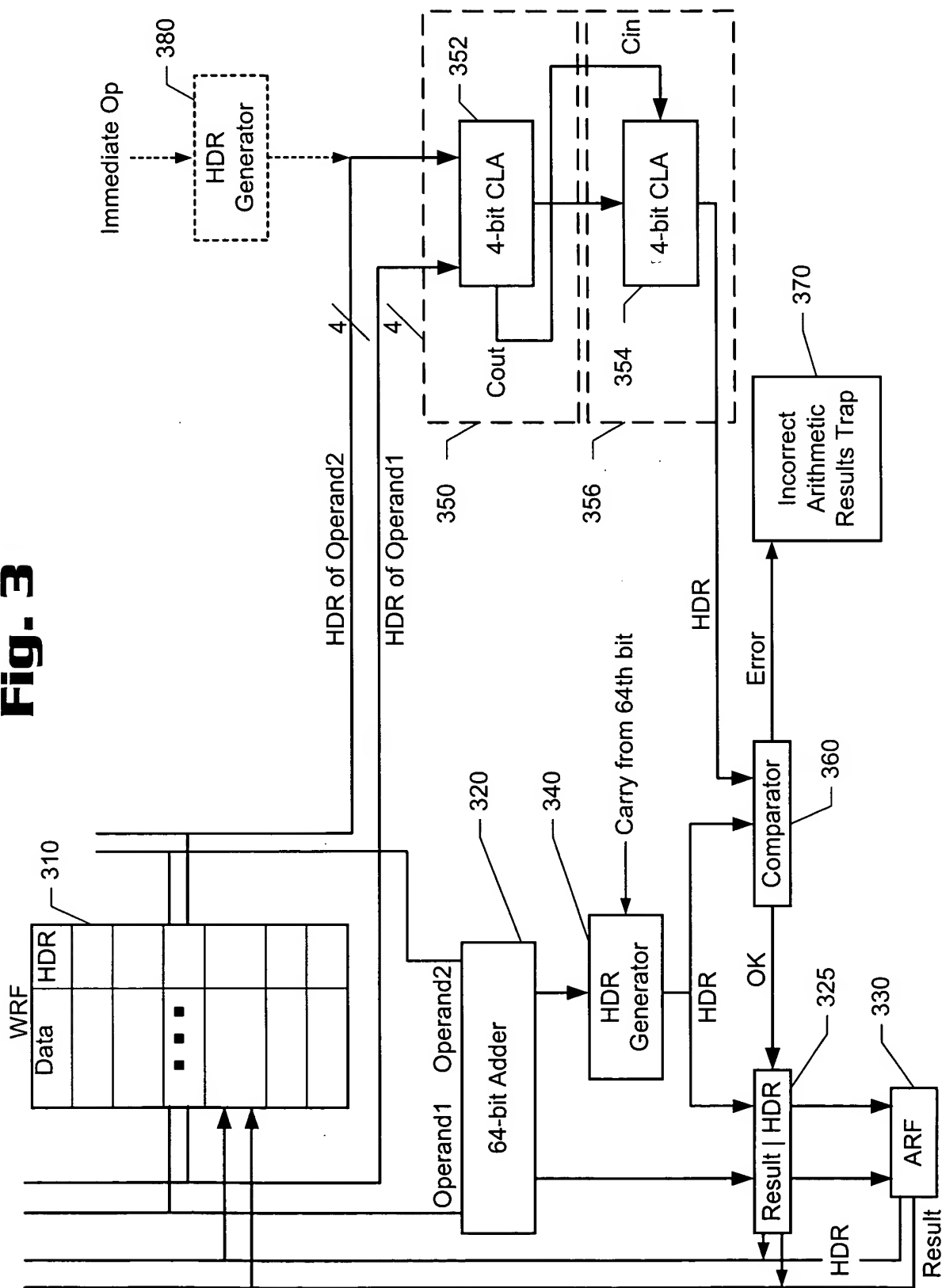
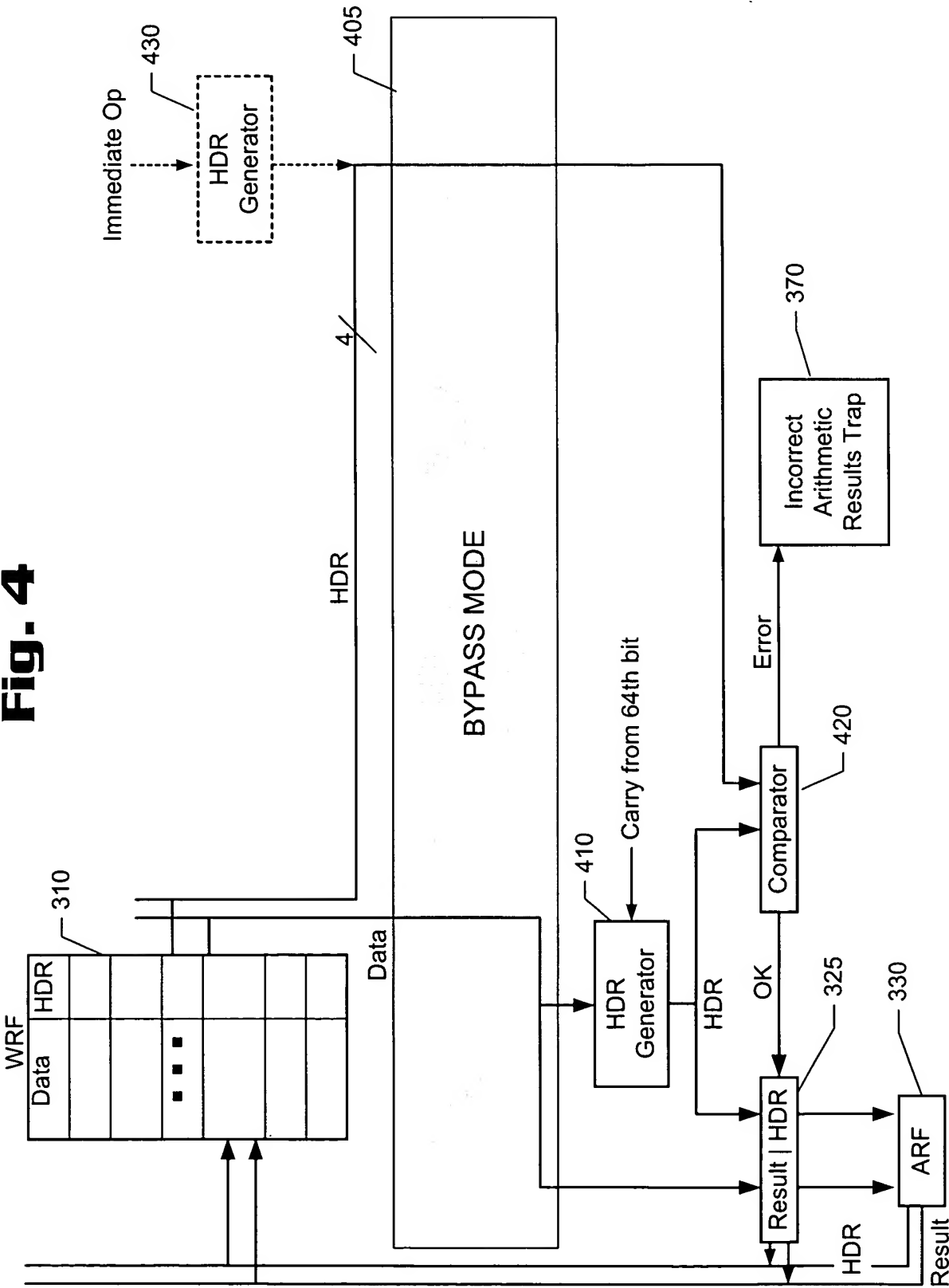


Fig. 4



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Fig. 5A

Truth Table

Inputs				Outputs			
S1	C1	S0C0		B1	B2	B3	B4
0	0	0	0	0	0	0	0
0	0	0	1	0	1	0	0
0	0	1	0	1	0	0	0
0	0	1	1				
0	1	0	0	0	1	0	0
0	1	0	1	0	0	1	0
0	1	1	0	1	1	0	0
0	1	1	1				
1	0	0	0	1	0	0	0
1	0	0	1	1	1	0	0
1	0	1	0	0	1	0	0
1	0	1	1				
1	1	0	0				
1	1	0	1				
1	1	1	0				
1	1	1	1				

Fig. 5C

$$B1 = S0\bar{S1} + S1\bar{S0} = S0 \oplus S1$$

$$B2 = \bar{C1}C0 + C1\bar{C0} + S1S0 = C1 \oplus C0 + S1S0$$

$$B3 = C0C1$$

$$B4 = 0$$

Fig. 5B

B1	$\bar{S0}\bar{C0}$	$\bar{S0}C0$	$S0C0$	$S0\bar{C0}$
$\bar{S1}\bar{C1}$	0	0	X	1
$\bar{S1}C1$	0	0	X	1
$S1\bar{C1}$	X	X	X	X
$S1C1$	1	1	X	0

B2	$\bar{S0}\bar{C0}$	$\bar{S0}C0$	$S0C0$	$S0\bar{C0}$
$\bar{S1}\bar{C1}$	0	1	X	0
$\bar{S1}C1$	1	0	X	1
$S1\bar{C1}$	X	X	X	X
$S1C1$	0	1	X	1

B3	$\bar{S0}\bar{C0}$	$\bar{S0}C0$	$S0C0$	$S0\bar{C0}$
$\bar{S1}\bar{C1}$	0	0	X	0
$\bar{S1}C1$	0	1	X	0
$S1\bar{C1}$	X	X	X	X
$S1C1$	0	0	X	0